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Form PTO-1449

INFORMATION DISCLOSURE CITATION

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Attorney Docket No.	Serial No.:
062020-1440	10/632,176
Applicant: Ayazi, et al.	
Filing Date: 7-31-03	Group: 2811

U.S. PATENT DOCUMENTS

Examiner Initials	Item	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
DNA	A	3,513,356		Newell			6-27-67
	B	3,634,787	1-11-72	Newell	333	72	1-23-68
	C	5,162,691	11-10-92	Mariani, et al.	310	321	1-22-91
	D	5,426,070	6-20-95	Shaw, et al.	437	203	5-26-93
	E	5,491,604	2-13-96	Nguyen, et al.	361	278	12-11-92
	F	5,587,620	12-24-96	Ruby, et al.	310	346	12-21-93
	G	5,589,082	12-31-96	Lin, et al.	216	2	6-7-95
	H	5,663,505	9-2-97	Nakamura	73	702	5-8-96
	I	5,719,073	2-17-98	Shaw, et al.	437	228	9-27-94
	J	5,846,849	12-8-98	Shaw, et al.	438	52	2-24-97
	K	5,847,454	12-8-98	Shaw, et al.	257	734	9-22-97

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DNA	L	Ayazi, et al.; Piezoelectric On Semiconductor-On-Insulator Microelectromechanical Resonators And Methods Of Fabrication; U.S. Patent Application Serial No.10/631,948; filed July 31, 2003
	M	Ma, et al.; Sacrificial Layer Technique to Make Gaps in MEMS Applications; US Patent Application Publication No.: 2003/0006468 A1; filed June 27, 2001.
	N	Bourgeois, et al.; Design of Resonators for the Determination of the Temperature Coefficients of Elastic Constants of Monocrystalline Silicon; 1997 IEEE International Frequency Control Symposium; Orlando, FL.; Pages 791-799
	O	Mihailovich, et al.; Dissipation Measurements of Vacuum-Operated Single-Crystal Silicon Microresonators, Sensors and Actuators A 50 (1995); Pages 199-207
	P	Roszhart, et al.; The Effects of Thermoelastic Internal Friction on the Q of Micromachined Silicon Resonators; IEEE Solid State Sensor and Actuator Workshop, Hilton Head, SC 6/4-7/90 (1990) pp 489-494
	Q	Cleland, et al.; Fabrication of High Frequency Nanometer Scale Mechanical Resonators from Bulk Si Crystals; Condensed Matter Physics, CA Inst. of Tech.; Received June 21, 1996, Pages 2653-2655
	R	No, et al.; The HARPSS Process for Fabrication of Nano-Precision Silicon Electromechanical Resonators; IEEE Conf. of Nanotechology; October 30, 2001; Pages 489-494
	S	Water, et al.; "Physical and Structural Properties of ZnO Sputtered Films"; Dept. of EE, National Cheng Kung University; Received May 7, 2001; Pages 67-72

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Kamran Sheikh	11-12-04

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DHK	T	5,873,153	2-23-99	Ruby, et al.	29	25.35	8-27-96
	U	5,884,378	3-23-99	Dydyk	29	25.35	7-22-96
	V	5,894,647	4-20-99	Lakin	29	25.35	6-30-97
	W	5,914,801	6-22-99	Dhuler, et al.	359	230	9-27-96
	X	5,976,994	11-2-99	Nguyen, et al.	438	795	6-13-97
	Y	5,998,906	12-7-99	Jerman, et al.	310	309	8-17-98
	Z	6,000,280	12-14-99	Miller, et al.	73	105	3-23-98
	a	6,051,866	4-18-00	Shaw, et al.	257	417	8-11-98
	b	6,060,818	5-9-00	Ruby, et al.	310	363	6-2-98
	c	6,067,858	5-30-00	Clark, et al.	73	504.16	5-30-97
	d	6,087,747	7-11-00	Dhuler, et al.	310	90	4-1-99

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	e	DeVoe; Piezoelectric Thin Film Micromechanical Beam Resonators, Sensors and Actuators, A 88; 2001; pp 263-272
DHK	f	Bhave, et al.; Poly-Sige: A High-Q Structural Material for Integrated RF Mems; Solid-State Sensor, Actuator and Microsystems Workshop, Hilton Head Island, South Carolina, June 2-6, 2002; pp 34-37
	g	Hsu, et al.; Q Optimized Lateral Free-Free Beam Micromechanical Resonators; Digest of Technical Papers, The 11th Int. Conf. On Solid-State Sensors & Actuators (Transducers'01), Munich, Germany, June 10-14, 2001, pp. 1110-1113
	h	Yasumura, et al.; Quality Factors in Micron- and Submicron – Thick Cantilevers; Journal of Microelectromechanical Systems, Vol. 9, No. 1, March 2000; pp 117-125
	i	Peterson, et al.; Resonant Beam Pressure Sensor Fabricated With Silicon Fusion Bonding; 6th Int. Conference on Solid State Sensors and Actuators (Transduces '91), San Francisco, CA; 1991; pp 664-667
	j	Abdelmoneum, et al.; Stemless Wine-Glass Mode Disk Micromechanical Resonators; IEEE; 2003; pp 698-701
	k	Piekarski, et al; Surface Micromachined Piezoelectric Resonant Beam Filters; Sensors and Actuators, A 91; 2001; pp 313-320
	l	Lifshitz, et al.; Thermoelastic Damping In Micro- and Nanomechanical Systems; Physical Review B; Vol. 61, No. 8; February 15, 2000; pp 5600-5609
	m	Srikar, et al.; Thermoelastic Damping In Fine-Grained Polysilicon Flexural Beam Resonators; Journal of Microelectromechanical Systems, Vol. 11, No. 5; October, 2002; pp 499-504

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Kamy Nguyen	11-12-04

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DHC	n	6,121,552	9-19-00	Brosnihan, et al.	174	253	6-13-97
	o	6,134,042	10-17-00	Dhuler, et al.	359	224	4-1-99
	p	6,215,375	4-10-01	Larson, III, et al.	333	187	3-30-99
	q	6,236,281	5-22-01	Nguyen, et al.	331	154	9-21-99
	r	6,238,946	5-29-01	Ziegler	438	50	8-17-99
	s	6,239,536	5-29-01	Lakin	310	364	9-8-98
	t	6,256,134	7-3-01	Dhuler, et al.	359	212	7-28-00
	u	6,275,122	8-14-01	Speidell, et al.	333	186	8-17-99
	v	6,275,320	8-14-01	Dhuler, et al.	359	237	9-27-99
	w	6,291,931	9-18-01	Lakin	310	364	11-23-99
	x	6,296,779	10-2-01	Clark, et al.	216	66	2-22-99

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DHC	y	Lakin; Thin Film Resonators and Filters; IEEE Ultrasonics Symposium; 1999; pp 895-906
	z	Ruby, et al.; Ultra-Miniature High-Q Filters and Duplexers Using FBAR Technology; IEEE International Solid-State Circuits Conference; 2001; pp 120-121 & 438
	AA	Clark, et al.; High-Q VHF Micromechanical Contour-Mode Disk Resonators; IEEE; 2000; pp 493-496
	BB	Wang, et al.; VHF Free-Free Beam High-Q Micromechanical Resonators; Journal of Microelectromechanical Systems, Vol. 9, No. 3; September 2000; pp 347-360
	CC	Piazza, et al.; Voltage-Tunable Piezoelectrically-Transduced Single-Crystal Silicon Resonators on SOI Substrate; in Proc. IEEE Internatinal Microelectro Mechanical Systems Conference (MEMs '03), Koyoto, Japan, Jan. 2003
	DD	Pourkamali, et al.; A 600kHz Electrically-Coupled MEMs Bandpass Filter; MEMs '03, pp. 702-705
	EE	Pourkamali, et al.; SOI-Based HF and VHF Single-Crystal Silicon Resonators With SUB-100 Nanometer Vertical Capacitive Gaps; Transducers '03, Boston, MA; June 2003
	FF	No, et al.; Single-Crystal Silicon HARPSS Capacitive Resonators With Submicron Gap-Spacing; Solid State Sensors, Actuators and Microsystems Workshop; pp. 281-284, Hilton Head, SC; June 2002

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Kamy Bahre	11-12-04

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DHL	GG	6,348,846	2-19-02	von Gutfeld, et al.	333	201	10-14-99
	HH	6,373,682	4-16-02	Goodwin-Johansson	361	278	12-15-99
	II	6,377,438	4-23-02	Deane, et al.	361	278	10-23-00
	JJ	6,391,674	5-21-02	Ziegler	438	52	12-28-00
	KK	6,428,713	8-6-02	Christenson, et al.	216	2	10-1-99
	LL	6,429,755	8-6-02	Speidell, et al.	333	197	1-30-01
	MM	6,433,401	8-13-02	Clark, et al.	257	524	4-5-00
	NN	6,480,645	11-12-02	Peale, et al.	385	18	1-30-01
	OO	6,485,273	11-26-02	Goodwin-Johansson	417	410.2	9-1-00
	PP	6,495,892	12-17-02	Goodman, et al.	257	414	3-26-99
	QQ	6,497,141	12-24-02	Turner, et al.	73	105	6-5-00

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	SS	Ho, et al.; Through-Support-Coupled Micromechanical Filter Array; School of Electrical and Computer Engineering; Proc. IEEE International Micro Electro Mechanical Systems Conference (MEMS'04), Maastricht, The Netherlands, Jan. 2004, pp769-772
	TT	Pourkamali, et al.; Fully Single Crystal Silicon Resonators With Deep-Submicron Dry-Etched Transducer Gaps; Proc. IEEE International Micro Electro Mechanical Systems Conference (MEMS '04), The Netherlands, Jan. 2004, pp 813-816
	UU	Pourkamali, et al.; Electrostatically Coupled Micromechanical Beam Filters; Proc. IEEE International Micro Electro Mechanical Systems Conference (MEMS '04), The Netherlands, Jan. 2004, pp. 584-587
	VV	Amini, et al.; A High Resolution, Stictionless, CMOS Compatible SOI Accelerometer with a Low Noise, Low Power, 0.25 μm CMOS Interface; IEEE MEMS'04, Jan. 2004, pp. 572-575
	WW	Humad, et al.; High Frequency Micromechanical Piezo-On-Silicon Block Resonators; IEEE; 2003

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DNL	XX	6,555,201	4-29-03	Dhuler, et al.	428	137	5-15-00

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DNL	YY	Abdolvand, et al.; Thermoelastic Damping in Trench-Refilled Polysilicon Resonators; IEEE; 2003; pp 324-327
	ZZ	Sundaresan, et al.; A 7-MHz Process, Temperature and Supply Compensated Clock Oscillator in 0.25μm CMOS; Proc. of International Symposium on Circuits and Systems (ISCAS) 2003, vol. 1, pp. 693-696, May 2003
	aa	No, et al.; Single-Crystal Silicon HARPSS Capacitive Resonators With Submicron Gap-Spacing; Solid-State Sensor, Actuator and Microsystems Workshop, Hilton Head Island, South Carolina, June 2-6, 2002; pp 281-284
	bb	Balaraman, et al.; Low-Cost Low Actuation Voltage Copper RF MEMS Switches; IEEE; 2002; pp 1225-1228
	cc	Dalmia; Design of Inductors in Organic Substrates For 1-3 GHz Wireless Applications; IEEE; 2002; pp 1405-1408
	dd	Dalmia, et al.; High-Q RF Passives on Organic Substrates Using a Low-Cost Low-Temperature Laminate Process; Proc. 2002 Symposium on Design, Test, Integration and Packaging of MEMS/MOEMS (DTIP 2002), Cannes, France, May 2002, pp. 660-669
	ee	Ayazi, et al.; A High Aspect-Ratio Polysilicon Vibrating Ring Gyroscope; Solid-State Sensor and Actuator Workshop, Hilton Head Island, South Carolina, June 4-8, 2002; pp 289-292
	ff	Ayazi, et al.; High Aspect-Ratio Dry-Release Poly-Silicon MEMS Technology for Inertial-Grade Microgyroscopes; IEEE; 2000; pp 304-308
	gg	Ayazi, et al.; Design and Fabrication of A High-Performance Polysilicon Vibrating Ring Gyroscope; IEEE; 1998; pp 621-626
	hh	Selvakumar, et al.; A High Sensitivity Z-Axis Torsional Silicon Accelerometer; The International Electron Devices Meeting; San Francisco, CA; Dec. 8-11, 1996
	ii	Hao, et al.; An Analytical Model for Support Loss in Micromachined Beam Resonators With In-Plane Flexural Vibrations; Sensors and Actuators, A 109; 2003; pp 156-164

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DHL	jj	Pourkamali, et al.; High-Q Single Crystal Silicon HARPSS Capacitive Beam Resonators With Self-Aligned Sub-100-nm Transduction Gaps; Journal of Microelectromechanical Systems, Vol. 12, No. 4; August 2003; pp 487-496
	kk	Ayazi; The HARPSS Process for Fabrication of Precision MEMS Inertial Sensors; Mechatronics 12; 2002; pp 1185-1199
	ll	Ayazi; A HARPSS Spolysilicon Vibrating Ring Gyroscope; Journal of Microelectromechanical Systems; Vol. 10, No. 2; June 2001; pp 169-179
	mm	Ayazi, et al.; High Aspect-Ratio Combined Poly and Single-Crystal Silicon (HARPSS) MEMS Technology; Journal of Microelectromechanical Systems; Vol. 9, No. 3; Sept. 2000; pp 288-294
	nn	Ayazi, et al.; High Aspect-Ratio Polysilicon Micromachining Technology; Sensors and Actuators; 87; 2002; pp 46-51
	oo	Yazdi, et al.; Micromachined Inertial Sensors; Proceedings of the IEEE; Vol. 86, No. 8; August 1998; pp 1640-1659

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nhl	A	US 2003/0006468 A1	01/09/03	Ma et al.	257	416	06/27/01
nhl	B	5,976,994	11/02/99	Nguyen et al.	438	795	06/13/97
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nhl	P	PCT International Search Report
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